

Phase 1 Heritage Impact Assessment for a proposed new service station, business and residential area on Portions 13 and 15 of Farm Musket 2718, Bloemfontein Free State Province.

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Introduction

The application relates to a proposed development of a new new service station, business and residential area that will cover a 8.2 ha area on Portions 13 and 15 of Farm Musket 2718, Bloemfontein (**Fig. 1 & 2**). The site is situated on relatively open grassland terrain on the corner of Frans Kleynhans Road and Woodland Hills Boulevard (**Fig. 3 & 4**).

Site Centroid Coordinates: 29° 3'51.94"S 26°10'38.47"E

Map Reference:

1:50 000 scale topographic 2926 AA Bloemfontein

1:250 000 scale geological 2926 Bloemfontein

The heritage significance of the affected area was evaluated on the basis of existing field data, database information and published literature. This was followed by a field assessment by means of a pedestrian survey. A Garmin Etrex Vista GPS hand model (set to the WGS 84 map datum) and a digital camera were used for recording purposes. Maps and aerial photographs (incl. Google Earth) were consulted and integrated with data acquired during the on-site inspection. Site significance classification standards prescribed by SAHRA (2005) were used to indicate overall significance and mitigation procedures where relevant (**Table 1**).

Background

According to the 1:250 000 scale geological 2926 Bloemfontein, the Bloemfontein area is underlain by fluviially derived sedimentary rocks of the Karoo Supergroup, with Jurassic volcanic and igneous intrusions in the form of dolerite sills and dykes dominating the local landscape (**Fig. 5**). Surface scatters of Later Stone Age and Middle Stone Age artefacts are

frequent archaeological components in pristine rural areas around Bloemfontein and particularly along river drainages such as the nearby Modder River and the Renosterspruit. Stone Age artefacts were recorded as contextually derived individual finds in the open veld at nearby Lilyvale 2313. Other components relating to archaeological significance are military structural remnants and graveyards dating back to the Anglo Boer War and its aftermath, located on the nearby farms Lilyvale 2313, Hillandale 249 and Hill View 1377. Structures relating to farming activities include stone kraals and the foundations of houses or sheds. Many of these structures are no longer intact. A large rubbish dump containing bottles and other military artifacts and an unmarked graveyard dating to between 1930 and the 1960 was recently recorded at Lilyvale, but by the 1950's, few of these structures were on record or seem to have remained intact. A military cemetery is located on Musket farm, but will not be affected by the proposed development (**Fig. 6**).

Field Assessment

The underlying geology at the site is represented by paleontologically insignificant dolerite that is capped by a veneer of Quaternary overburden comprising brown to red residual soils (**Fig. 7**). Suburban and commercial developments have noticeably impacted on the surrounding area while the site itself has been disturbed ongoing human activities, with no aboveground traces of historically significant structures, rock art (engravings), prehistoric structures or graves (**Fig. 8**). A systematic foot survey showed no evidence for the preservation of Quaternary fossil remains or Stone Age archaeological material that are either capped or distributed as surface scatters on the landscape. There is also no evidence of historically significant structures located within the footprint. Isolated finds of 19th century ceramics and glass were recorded (**Fig. 9**).

Impact Statement & Recommendation

As far as the palaeontological heritage is concerned, the proposed development may proceed with no additional heritage assessments necessary. Potential archaeological impact at the site is considered to be non-existent. The affected area is assigned a site rating of Low Significance (Generally Protected C, **Table 1**).

References

Amery, L.S. 1906. The Times history of the war in SA, Vol 4. Sampson Low, Marston and Company. London.

Churchill, S.E., Brink, J.S., Berger, L.R. Hutchison, R.A., Rossouw L., *et. al.* 2000. Erfkroon: a new Florisian fossil locality from fluvial contexts in the western Free State, South Africa. *South.African Journal of Science* 96: 161 – 163.

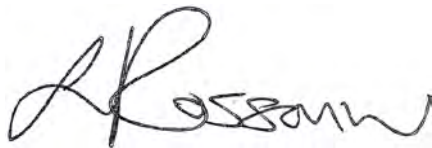
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DECLARATION OF INDEPENDENCE

I, Lloyd Rossouw, declare that I act as an independent specialist consultant. I do not have or will not have any financial interest in the undertaking of the activity other than remuneration for work as stipulated in the terms of reference. I have no interest in secondary or downstream developments as a result of the authorization of this project and have no conflicting interests in the undertaking of the activity.

A handwritten signature in black ink, appearing to read 'L. Rossouw', written in a cursive style.

20 / 08 / 2018

Tables & Figures

Table 1. Field rating categories as prescribed by SAHRA.

Field Rating	Grade	Significance	Mitigation
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction



Figure 1. Aerial view of the development footprint.



Figure 2. Position of the site (red polygon) in relation to Bloemfontein CBD.



Figure 3. General view of the terrain, looking northeast (above) and south (below).



Figure 4. General view of the terrain, looking west (above) and north (below).

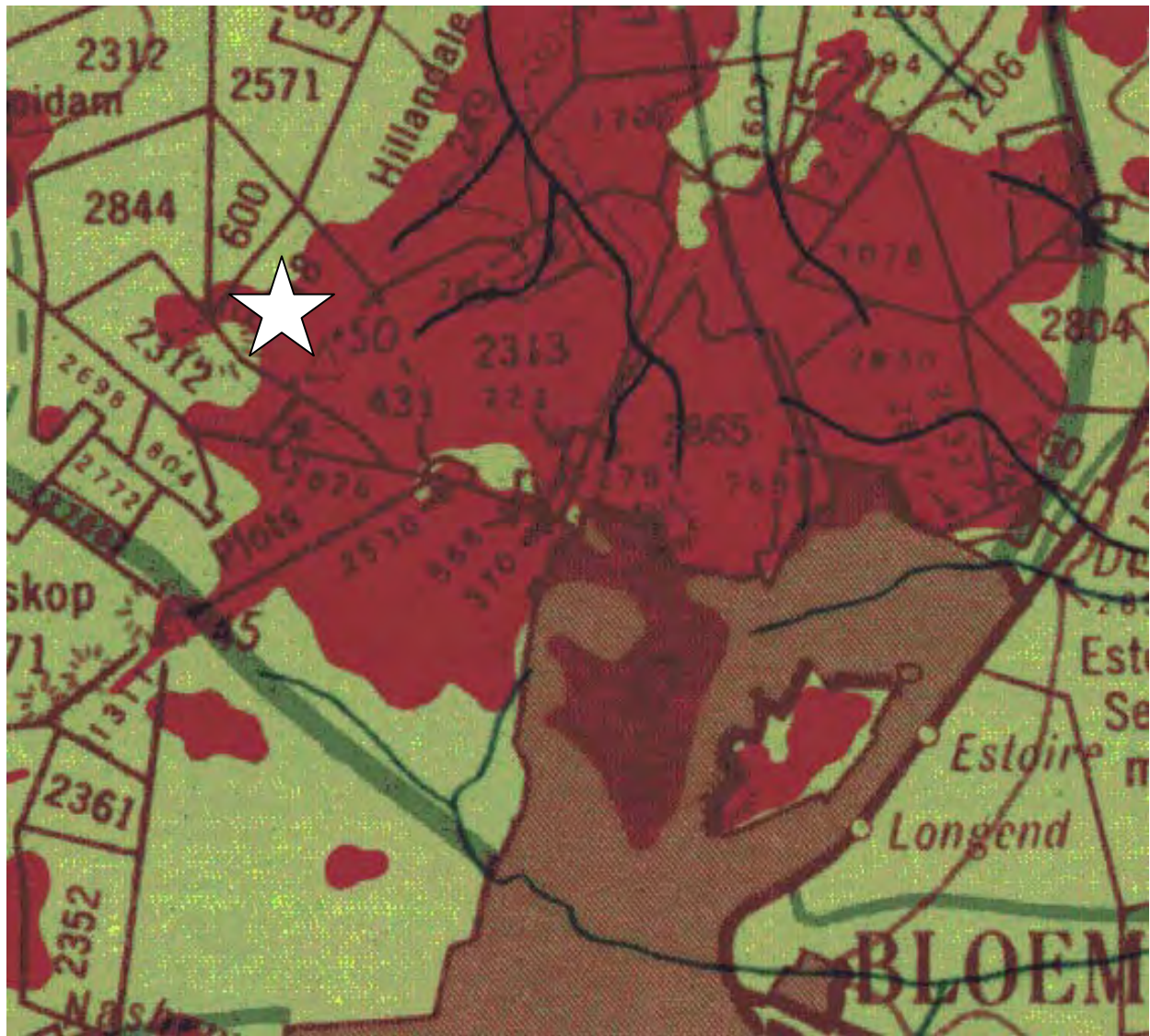


Figure 5. According to the 1:250 000 scale geological 2926 Bloemfontein, the site (white star) is situated within the outcrop area of the fossil-bearing Adelaide Subgroup (Karoo Supergroup, light green areas) but underlain by Jurassic volcanic and igneous intrusions in the form of dolerite sills (red areas).



Figure 6. A military graveyard is located about 160 m to the west of the western boundary of the proposed development footprint (yellow polygon).



Figure 7. Weather-resistant dolerite exposed in section.
Scale 1 = 10 cm.



Figure 8. Modern farming-related structures.





Figure 9. Modern dam, still in use.



Figure 10. Isolated scatters of 19th century ceramics and glass.